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PCB MANAGEMENT PLAN

Prepared for:
The School District of Philadelphia
Philadelphia, Pennsylvania

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Section 1
Introduction

In 1976, the Toxic Substances Control Act directed the U.S. Environmental Protection Agency to regulate the manufacture, processing, distribution, use, marking, storage, and disposal of polychlorinated biphenyls (PCBs). These regulations place certain obligations upon the School District of Philadelphia.

This document is the Management Plan for PCB electrical transformers which has been adopted by the School District. The plan provides the framework for activities associated with the School District's transformers which are classified by the U.S. Environmental Protection Agency as PCB transformers. These types of transformers utilize a dielectric fluid which contains PCBs at a concentration which equals or exceeds 500 parts per million.

PCBs were utilized in transformers because of their chemical stability, heat resistance, low flammability, low solubility in water, and low electrical conductivity. A limited number of the School District of Philadelphia's electrical transformers contain PCBs. Table 1 provides a listing of the locations where School District owned PCB transformers are in service.

The purpose of this plan is to document the regulatory compliance program which the School District will follow for PCB transformers it owns. Items addressed within this plan include the following:

- A summary of the locations and types of School District owned PCB transformers which are currently in-service;
- The School District personnel who are responsible for the safe and proper operation of these transformers;
- Operational procedures which the School District has adopted relative to these transformers;
- Inspections, recordkeeping and notifications;
- Training requirements for personnel who are actively managing these transformers;
- Procedures to be followed in the event of a leak from a School District owned PCB transformer; and
- A milestone schedule for implementation of activities associated with the PCB Management Plan.

Section 2
Inventory of PCB Transformers

The School District owns 33 PCB transformers which are in use at the 14 locations identified in Table 1. An inventory of these 33 PCB transformers is provided in Table 2. For each location, this table provides the following information:

- Number of PCB transformers;
- Serial number of each PCB transformer;
- The manufacturer of the transformer;
- The tradename of the fluid contained within the transformer;
- The volume of fluid within the transformer; and
- The weight of the fluid contained within each transformer.

All of the transformers, with the exception of the two transformers at the Old Clemente facility, are designed to reduce high voltage electricity, supplied by PECo Energy, to a lower voltage which is compatible with the electrical requirements of the individual schools. The two transformers at the Old Clemente facility, a former school now used only for limited administrative purposes, supply control power.

The PCB Coordinator for the School District maintains a permanent information record for each of these transformers. These records include inspection checklists and summaries, laboratory analytical data, and other relevant items. The PCB Coordinator is the individual designated to maintain permanent records associated with PCB equipment and activities. In addition, in accordance with the requirements of the US Environmental Protection Agency, the Philadelphia Fire Department has been formally advised of locations which contain PCB transformers owned by the School District.

Section 3
PCB Coordinator and Organization

The School District has established, within the Office of Environmental Management, the position of PCB Coordinator. The PCB Coordinator, Ms. Marijane Hooven (215-875-5785), is responsible for the safe and proper operation of the PCB transformers which are owned by the School District.

PCB Coordinator

The PCB Coordinator's responsibilities include, but are not limited to the following:

- The management of all inspections, recordkeeping, and notifications for activities which involve School District owned PCB transformers;
- The management of all wastes which are derived from the School District's PCB transformers;
- The implementation of operational procedures, spill response plans, inspections, and other items outlined within the PCB Management Plan;
- Maintaining a current knowledge of the regulations and policy of regulatory agencies having jurisdiction over School District owned PCB transformers;
- Assisting with the training of School District employees who directly or indirectly service or maintain these transformers, work in the immediate vicinity of the transformers, or have primary responsibility for building and personnel security and safety;
- The annual review of the PCB Management Plan and the development of necessary modifications to respond to changes in regulations or the operational requirements of the School District; and
- Overseeing the performance of contractors retained by the School District to assist with any aspect of inspection, maintenance, or repair of School District owned PCB transformers or the wastes derived from them.

The PCB Coordinator has the ability to mobilize contractors retained by the School District to assist with implementation of any aspect of the PCB Management Plan.

Organization Chart

In fulfilling the duties of the PCB Coordinator, assistance will be provided by a number of School District employees and contractors retained by the School District.

School District employees who are available to assist the PCB Coordinator in the implementation of the PCB Management Plan include:

- Staff of the Environmental Management Office;
- School District Electricians;
- School District Electrical Engineers;
- School District Building Engineers, including supervisory Personnel;
- School District Police;
- School District Telephone Dispatchers; and
- School Principals.

An organization chart depicting the PCB Coordinator and the resources available is provided as Figure 1.

Section 4
Operational Procedures

This section describes operational procedures which the School District has adopted for the facilities identified in Table 1.

Some of the operational procedures described herein are more stringent than those required by the U.S. Environmental Protection Agency. Operational procedures which are more stringent than required have been voluntarily adopted to enhance the safety of students, School District employees, visitors, and others.

This section does not address the mandated quarterly inspections, annual inventory, and required daily leak inspections, if leaking PCB transformers are found to exist. These items are discussed within Section 5 of this document.

School District employees who implement these operational procedures will receive training commensurate with their responsibilities. Sections 3 and 6 of this Management Plan provides information regarding training.

Operational procedures which the School District has adopted are listed below. These procedures will be reviewed, as a minimum, on an annual basis, and modifications made as needed.

1. Doors which provide direct access to transformers will be securely locked at all times. Repair of any doors, gates, enclosures, or locks shall be performed on a priority basis.

2. No combustible materials of any kind shall be stored within transformer vaults or enclosures. For transformers enclosed by metal fencing, no combustible material is to be placed within 20 feet of transformers. A suitable sign will be located within each enclosure stating that no combustibles are to be stored within the enclosure.

3. An inspection of the PCB transformers and the surrounding area shall be conducted each week that the school is occupied by students, faculty, or others. The inspection, which will be conducted by the Building Engineer, will be a visual inspection to confirm the following:

    - Absence of combustible materials;
    - Locks properly secured;
    - PCB labels properly attached to transformers, access doors, and enclosures; and
    - Absence of leaks.

    In the performance of these visual inspections, the Building Engineer will enter the room or vault where the transformers are located. For transformers enclosed by metal fencing, the inspection shall be conducted from outside of the fence.

4. The results of weekly inspections shall be documented immediately following the inspection on the form provided as Figure 2. This form will be maintained in a notebook or folder which will be kept by the Building Engineer. At the end of each month, the completed form will be sent to the PCB Coordinator for review and filing.

5. During the course of inspections, any combustible material found will be immediately removed by the Building Engineer and appropriately documented on the checklist. The Building Engineer will attempt to determine who placed these materials and provide instructions to that individual regarding applicable School District policy. Recurring situations associated with the inappropriate placement of combustible materials will be brought to the attention of the PCB Coordinator for action.

6. During the course of inspections, any doors which were found to be unlocked or in need of repair will be documented and immediately locked or repaired. The Building Engineer will attempt to determine who left the door unlocked and provide instructions to that individual regarding applicable School District policy. If the door and or locks need to be repaired and adequate materials or resources are not available to the Building Engineer, the Regional Manager will be notified. The Regional Manager will, on a priority basis, notify the PCB Coordinator, and arrange for the supply of the materials required. The PCB Coordinator will be responsible for confirming that the necessary repairs have been completed.

7. As part of the weekly inspection, the Building Engineer shall confirm that PCB labels, which have been affixed to the transformers, doors, fence, hallway, or other means of access, are present and not visually obstructed. The Building Engineer will be provided with "spare" PCB labels which meet the marking requirement of the U.S. Environmental Protection Agency. As necessary, except for the labels on the transformers, the Building Engineer will replace any labels which have been removed or defaced. In the unlikely event that a label has been removed from a transformer, the School District electrician and the Regional Manager will be immediately notified. The Regional Manager will also notify the PCB Coordinator. The electrician will replace the label within one school day of being notified. The PCB Coordinator will, upon receipt of notice of the absence of a label on a transformer, will confirm with the Building Engineer that the label was replaced.

8. During the course of the inspections, any suspected leak from a PCB transformer will be appropriately noted on the inspection form (Figure 2). Additionally, the Building Engineer shall IMMEDIATELY notify his Regional Manager as well as the School District Dispatcher (215-735-6666), who will in turn immediately notify the PCB Coordinator. In the event that the PCB Coordinator can not be contacted, the following personnel shall be notified by the School District Dispatcher:

   - Mr. Elwood Miller, PSD Director of Design and Construction, 215-875-3950;
   - Mr. Clyde Jones or Mr. Robert Malkowski, PSD Maintenance Department, 215-875-3641
   - Keith Choper, Keating Environmental Management, Inc. 610-296-3800.

9. Upon receipt of a report regarding any suspected leak from a PCB transformer, the PCB Coordinator or the School District Dispatcher shall make an entry into a log book. This entry will include the following minimum information:

   - Name of person reporting the spill and the location of the spill;
   - Time that the spill was discovered;
   - Time that the spill was reported;
   - The serial number of the leaking transformer; and
   - Amount of fluid which appears to have spilled/size of area which is impacted by the leak.

10. Upon notification of a report of a leak, the PCB Coordinator, School District Engineers, Electricians, Maintenance Personnel or employees of contractors of the School District shall, within 24 hours of the report, go to the facility reporting the leak to assess the situation. It is the policy of the School District to have the Building Engineers report any leaks. It is not intended that the Building Engineers attempt to differentiate between migrating leaks where "...the release results in any quantity of PCBs running off or about to run off the external surface of the equipment..." and minor seepage or weeps. Consistent with Federal regulations, leaks will be reported either to the National Response Center (NRC) (800-424-8802) or to both the NRC and Region III of the U.S. Environmental Protection Agency (215-597-7668).

11. It is the School District's policy to initiate the repair of leaking PCB transformers immediately. The PCB Coordinator has the authority to authorize immediate repairs and cleanup, utilizing either School District personnel or outside contractors. Such repairs and cleanup will be initiated within 48 hours of receipt of the spill report by the PCB Coordinator. A further discussion regarding the School District's response to leaks is provided within Section 7 of this document.

12. The School District believes that it has identified all of the PCB transformers it owns. However, prior to repairing or disposing of any fluid filled electrical device, a determination shall be made regarding the PCB status of that device. This determination may involve testing of fluids, review of manufacturers literature, or other means. In the event that additional PCB transformers or devices are determined to exist, PCB labeling will occur within 7 days and the Philadelphia Fire Department will be notified within 30 days. If necessary, based upon the unit discovered, electrical protection will be incorporated within 18 months of discovery, or the unit will be removed from service or otherwise reclassified.

13. If any of the School District's PCB transformers are involved in a fire-related incident, in addition to notification of the Philadelphia Fire Department, the National Response Center (1-800-424-8802) will be immediately notified. As defined by applicable Federal regulations (40 CFR 761), a fire related incident involving a PCB transformer involves the generation of sufficient heat and/or pressure to result in the violent or non-violent rupture of a PCB transformer and the release of PCBs.

The School District's PCB Coordinator is responsible for making fire-related notifications. In addition, the PCB Coordinator will act as soon as possible to contain and control any potential release of PCBs and incomplete combustion of product.

Section 5
Inspection, Recordkeeping, and Notifications

This section of the PCB Management Plan addresses inspections, recordkeeping, and notifications mandated by the U.S. Environmental Protection Agency. This section primarily addresses normally recurring activities including quarterly inspections, and annual document logs and records. Also addressed within this section are the subjects of fire related incidents and the creation and maintenance of daily logs associated with leaking PCB transformers. An addendum to this Management Plan will address or expand on recordkeeping and notifications associated with cleanups and waste handling activities.

The PCB Coordinator is responsible for ensuring compliance with all inspection, recordkeeping, and notification requirements contained in the applicable regulations. Additionally, the PCB Coordinator will maintain suitable records of all documents associated with School District owned PCB transformers.

Quarterly Inspections

A visual inspection of each School District owned PCB transformer will be performed at least once every three months. The primary purpose of the inspection is to visually check for signs and location of leakage and to confirm the absence of combustible materials from the transformer areas. In the performance of the inspection, the inspector will enter the room or vault where the transformers are located. For transformers enclosed by metal fencing, the inspection shall be conducted from within the enclosure unless a full visual inspection of the transformer can be conducted from outside of the fence. An inspection will be held during each of the following time periods:

- January- March;
- April-June;
- July-September; and
- October-December.

There will be a minimum 30 day interval between subsequent inspections.

All quarterly PCB inspections will be performed by the PCB Coordinator or an individual or individuals designated by the PCB Coordinator for this activity. The individual designated by the PCB Coordinator shall have experience in the performance of these inspections.

The results of quarterly inspections shall be documented, in writing, in a manner substantially similar to the form currently being utilized (refer to Figure 3).

The records of inspection shall be maintained by the PCB Coordinator for at least 3 years after disposing of the transformer. For purposes of convenience, a duplicate of the form associated with the most recently completed quarterly inspection may be

maintained by the Building Engineer, at the School which houses the inspected transformer. However, the official copy of all records will be maintained by the PCB Coordinator at a central facility.

Annual Document Logs and Annual Records

Annual Document Logs and Annual Records will be maintained on a calendar year basis, and will be completed by July 1st of each year for the preceding calendar year. These documents will be maintained by the School District for a minimum of three years after the School District ceases using or storing PCB transformers.

The PCB Coordinator is responsible for the development and maintenance of these logs and records.

Annual Document Logs

The annual document log shall be developed to comply with the regulatory requirements (40 CFR 761.180(a) and will be developed based upon published guidance provided by USEPA.

Currently, it is anticipated that the Annual Document Log for the School District will contain all of the following components as appropriate:

1. The name and address of each location which is the subject of the annual log. As appropriate, the USEPA identification number of the schools will be included.
2. Information regarding PCB transformers in service.
3. Information regarding PCB transformers removed from service for disposal.
4. Information regarding PCB articles removed from service for disposal.
5. Information regarding PCB article containers removed from service for disposal.
6. Information regarding bulk PCB wastes removed from service for disposal.

Annual Records

The Annual Records maintained by the School District shall include all signed manifests generated by the School District's facilities, as well as Certificates of Disposal received by the School District during the calendar year.

Leaking PCB Transformers

If a PCB transformer is found to have a release which results in any quantity of PCBs running off or about to run off the external surface of the transformer, the transformer shall be considered leaking.

The determination that a leak has occurred will be made by the PCB Coordinator, who will make the appropriate notifications.

The School District recognizes that it has the following spill reporting obligations:

- Spills estimated to be 1 pound or more (approximately 1 pint of Askarel) must be reported to the National Response Center (800-424-8802);
- Spills estimated to be 10 pounds or more (approximately 1 gallon) must also be reported to Region III of the U.S. Environmental Protection Agency (215-597-7668); and

- Notifications regarding spills will be given in the shortest possible time after discovery of a spill, but in no case later than 48 hours after discovery.

It is the policy of the School District to initiate immediate repair of leaking PCB transformers. Repairs and cleanup will be initiated within 48 hours of receipt of a spill report by the PCB Coordinator. An entry into a log book will be made by the individual receiving the leak report. This entry will include the following minimum information:

- Name of person reporting the spill and the location of the spill;
- Time that the spill was discovered;
- Time that the spill was reported;
- The serial number of the leaking transformer; and
- Amount of fluid which appears to have spilled/amount of area which is impacted by the leak.

Leaking PCB transformers will be inspected on a daily basis to confirm that the leaking fluid is being contained. These daily inspections will be performed by an individual(s) designated by the PCB Coordinator for this activity. The individual(s) designated by the PCB Coordinator to conduct these daily inspections shall have experience in the performance of these inspections.

All daily inspections shall be documented, in writing, in a manner substantially similar to the form provided as Figure 4.

The records of daily inspection shall be maintained by the PCB Coordinator for at least 3 years after disposing of the transformer.

While the School District believes that it has identified all of the PCB transformers it owns, if a leak is observed in a School District owned transformer which has not been tested, and a determination can not be made regarding its PCB status, it will be treated as a PCB contaminated transformer until adequate documentation can be developed to clarify its status.

Documentation associated with cleanup activities for leaking PCB transformers will be developed and maintained by the PCB Coordinator. The following information will be documented and maintained for a minimum period of 5 years after completion of the cleanup.

1. The source of the spill.
2. The date and time that the spill occurred.
3. The date and time that cleanup was completed or terminated.
4. The nature and duration of any delayed cleanup.
5. A description of the spill location.
6. Sampling data or other method used to determine the spill boundaries.
7. Description of surfaces cleaned.
8. Post-cleanup verification sampling data.

Any PCB contaminated materials which are generated shall be placed within a properly labeled DOT shipping drum for off-site disposal. The drum shall be staged in a secure location pending disposal. Disposal of PCB contaminated materials is the responsibility of the PCB Coordinator.

Fire Related Incidents

If any of the School District's PCB transformers are involved in a fire-related incident, the Philadelphia Fire Department and the National Response Center (1-800-424-8802) will be immediately notified. As defined in the regulations, a fire related incident involving a PCB transformer involves the generation of sufficient heat and/or pressure to result in the violent or non-violent rupture of the transformer and the release of PCBs.

The School District's PCB Coordinator is responsible for making this notification. In addition, the PCB Coordinator will act as soon as possible to contain and control any potential release of PCBs and incomplete combustion of product.

Section 6
Training

The School District of Philadelphia recognizes that to ensure that PCB transformers are operated in compliance with applicable regulations, periodic training is required. Additionally, operations conducted in conformance with applicable regulations enhances the safety of School District employees, students, visitors, and others.

As noted within Section 1, only a limited number of schools have PCB transformers. The majority of schools within the Philadelphia School District do not have PCB transformers. Therefore, it is not necessary for all employees of the School District to receive information or training which concerns PCB transformers. Rather, training will be provided to employees who either directly or indirectly service or maintain these transformers, work in the immediate vicinity of the transformers, or have primary responsibility for building and personnel security and safety.

Employees of the School District of Philadelphia who will receive training include:

- School District Electricians;
- School District Electrical Engineers;
- School District Building Engineers, including supervisory Personnel*;
- School District Police*;
- School District Telephone Dispatchers;
- Staff of the Environmental Management Office; and
- School Principals*.

* Only if assigned to locations which have PCB transformers.

Personnel to be trained will be determined after consultation with the Office of Facilities Services and Management. As new Building Engineers are assigned to locations which have PCB transformers, the School District's PCB Coordinator will work with the Office of Facilities Services and Management to schedule their training within two weeks of their new assignment, if possible.

Training will be provided to designated School District personnel during normal working hours. It is anticipated that approximately 2 hours will be necessary to cover the course curriculum and to allow for an adequate discussion.

A uniform training curriculum will be utilized for all training, although the instructor will have the flexibility to emphasize specific areas as a function of the job(s) performed by the individuals being trained. The course curriculum will include the following subjects:

- PCB Transformers - "Where are they? Why are they subject to regulation?";
- Health effects of PCBs;
- Applicable regulations;
- Worker safety;
- Combustible materials;
- Marking;
- Security;
- Inspections;
- Record keeping; and
- Spills and spill response procedures.

Written records indicating the personnel who have been trained, the subjects discussed, and the date that training was provided will be maintained by the PCB Coordinator.

Personnel will receive training on an annual basis. Upon completion of a training program, a Certificate of Completion will be awarded to each individual.

Section 7
Spill Response Plan

This Section of the PCB Management Plan addresses the School District's plan for responding to leaking PCB transformers. This section addresses PCB transformers which are owned by PECO Energy (PECO) as well as by the School District.

PECO Energy Owned Transformers

Table 1 lists the PCB transformers which are owned by the School District. All other PCB transformers which serve the School District's facilities are owned by PECO.

The School District has no obligation for inspection, notification, recordkeeping, or repair of PECO equipment. However, it is the policy of the School District to advise PECO of any problems which are observed with PECO equipment

Upon observation of suspicion of a problem with a PECO owned transformer, the PCB Coordinator will contact PECO to ascertain the PCB status of the transformer. If the transformer is either a PCB or a PCB contaminated transformer, the School District's PCB Coordinator will confirm PECO's response to the situation, and determine if further action by the School District is appropriate.

School District Owned PCB Transformers

A key component of the School District's operational procedures is the frequent inspection of transformers. Frequent inspections enhance the School District's ability to prevent leaks, to minimize leakage in the event that a leak does occur, and to make rapid repairs. School District procedures which are applicable to leaking PCB transformers are summarized below[1].

1. Any observed leak from a PCB transformer will be cause for immediate notification of the Regional Facilities Manager as well as the School District Dispatcher (215-735-6666), who will in turn immediately notify the PCB Coordinator. In the event that the PCB Coordinator can not be contacted, the following personnel shall be notified:
   - Mr. Elwood Miller, PSD Director of Design and Construction, 215-875-3950;
   - Mr. Clyde Jones or Mr. Robert Malkowski, PSD Maintenance Department, 215-875-3641
   - Keith Choper, Keating Environmental Management, Inc. 610-296-3800.
2. Upon receipt of the reported leak, the PCB Coordinator, or other designated individual shall, within 24 hours of the report, go to the facility reporting the leak to assess the situation. It is the policy of the School District to have the Building Engineers report any leaks. It is not intended that the Building Engineers attempt to differentiate between migrating leaks where "...the

[1] Reference should be made to Section 4 and 5 of the School District's PCB Management Plan. These sections provide more complete information regarding the Operational Procedures as well as the Inspection, Recordkeeping, and Notification Procedures which the School District has adopted for PCB Transformers. Many of the Procedures and Notifications outlined within these sections are applicable to leaking PCB transformers and the School District's Spill Response Plan.

release results in any quantity of PCBs running off or about to run off the external surface of the equipment..." and minor seepage or weeps. Consistent with Federal regulations, leaks will be reported either to the National Response Center (NRC) (800-424-8802) or to both the NRC and Region III of the US Environmental Protection Agency (215-597-7668).

3. If a PCB transformer is found to have a release which results in any quantity of PCBs running off or about to run off the external surface of the transformer, the transformer shall be considered leaking

4. Repairs of leaking PCB transformers will be initiated within 48 hours of receipt of a spill report by the PCB Coordinator, barring extenuating circumstances. Upon receipt of a spill report, the staff of the Office of Environmental Management will enter the following minimum information into a log book:
   - Name of person reporting the spill and the location of the spill;
   - Time that the spill was discovered;
   - Time that the spill was reported;
   - The serial number of the leaking transformer; and
   - Amount of fluid which appears to have spilled/amount of area which is impacted by the leak.

5. If any of the School District's PCB transformers are involved in a fire-related incident, in addition to notification of the Philadelphia Fire Department, the NRC (1-800-424-8802) will be immediately notified.

Transformer Leaks - Repairs and Remediation

The School District intends primarily to utilize selected contractors to repair transformers leaks, remediate surfaces which have been impacted by spilled material, and to perform post-cleanup sampling and other activities necessary for regulatory compliance.

The School District has contracted with Keating Environmental Management, Inc. (Keating Environmental) to provide a variety of services associated with the School District's PCB transformers. These services include, but are not limited to inspection, repair, remediation, waste disposal, and regulatory compliance consulting. The School District's PCB Coordinator is authorized to utilize Keating Environmental (610-296-3800) on an as-needed basis.

Equipment necessary for an initial response to leaking PCB transformers will be maintained within each school which houses a School District owned PCB transformer. This equipment will be under the control of the Building Engineer. The equipment will be located in close proximity to each PCB transformer enclosure, will be prominently labeled, and available on an as-needed basis[2].

Spill equipment to be located at each facility includes the following:

- Oil adsorbent material including pads, rags, booms, and fiber-pearl;
- Cleaning rags;

[2] Initial response equipment will be located in close proximity to the School District owned PCB equipment. The equipment will not be stored within the vault or enclosure which houses the transformer, unless no other secure, easily accessible location exists.

- Cleaning solutions;
- Broom/dust pan;
- Protective shoe coverings;
- Safety glasses;
- Nitrile gloves;
- Inner latex gloves;
- Saranex coveralls;
- Caution/barrier tape;
- DOT Approved shipping drum.;
- Plastic sheeting;
- Plastic bags;
- PCB Labels; and
- Empty pails.

Any PCB contaminated materials which are generated shall be placed within a properly labeled DOT shipping drum for off-site disposal. The drum shall be staged in a secure location pending disposal. Disposal of PCB contaminated materials is the responsibility of the PCB Coordinator.

Transformer Fires

In the event of a fire involving a PCB transformer, the Philadelphia Fire Department will be the primary responder and will assume control of the facility.

The PCB Coordinator shall notify the National Response Center.

Section 8
Milestone Schedule

Figure 5 provides a schedule of the more significant activities associated with the School District owned PCB transformers which are anticipated to occur during 1995 and the first two weeks of 1996. Included in this schedule is a section on the in-progress evaluation of transformer electrical protection as well as the area cleaning and sampling activities.

A schedule for 1996 activities will be completed during December 1995.

Tables

Table 1
School District of Philadelphia
PCB Management Plan
Locations of School District Owned
In-Service PCB Transformers

School	Address
Strawberry Mansion Middle/High School	2200 N. 31st St.
Roxborough High School	6450 Ridge Ave.
Old Clemente	3939 North 5th St.
Overbrook High School	5701 Oxford St.
Northeast High School	7300 Glendale Ave.
South Philadelphia High School	2101 S. Broad St.
Benjamin Franklin High School	1400 Green St.
Girls High School	1400 W. Olney Ave.
Central East Middle School (formerly Olney Annex)	238 E. Wyoming Ave.
Randolph Skills Center	3161 Henry Ave.
Wanamaker School	1700 N. 11th St.
Hackett School	2400 Trenton Ave.
MYA Parkway	4901 Chestnut St.
George Washington High School	10159 Bustleton Ave.

Table 2
School District of the City of Philadelphia
PCB Management Plan
Inventory of School District Owned PCB Transformers
as of July 31, 1995

School	Inventory of PCB Transformers			Fluid (nameplate data)		
	Number of Units	Serial Number	Manufacturer	Tradename	Volume (gallons)	Weight (pounds)
Strawberry Mansion	2	3475167	Allis Chalmers	Chloroextol	225	3,313
		3475168	Allis Chalmers	Chloroextol	225	3,313
Roxborough	4	106626	Federal Pacific Electric Co.	Askarel	175	2,275
		106627	Federal Pacific Electric Co.	Askarel	175	2,275
		106628	Federal Pacific Electric Co.	Askarel	175	2,275
		106629	Federal Pacific Electric Co.	Askarel	175	2,275
Old Clemente (aux. transformer - see note 2)	2	6024406*	General Electric Co.	Transil oil	3.5	unknown
		6024445	General Electric Co.	Transil oil	3.5	unknown
Overbrook	3	87600	Marcus Transformer Co.	Askarel	147	1,910
		87601	Marcus Transformer Co.	Askarel	147	1,910
		87602	Marcus Transformer Co.	Askarel	147	1,910
Northeast HS	6	32641-1	PA Transformer Co.	Askarel	433	5,600
		32642-1	PA Transformer Co.	Askarel	433	5,600
		32639-1	PA Transformer Co.	Askarel	335	4,400
		32640-1	PA Transformer Co.	Askarel	335	4,400
		32639-2	PA Transformer Co.	Askarel	335	4,400
		32640-2	PA Transformer Co.	Askarel	335	4,400
South Philadelphia HS	2	31398-1	PA Transformer Co.	Askarel	618	8,050
		31399-1	PA Transformer Co.	Askarel	618	8,050
Benjamin Franklin HS	2	C858009	General Electric Co.	Pyranol	810	10,600
		C858010	General Electric Co.	Pyranol	810	10,600

Table 2
School District of the City of Philadelphia
PCB Management Plan
Inventory of School District Owned PCB Transformers
as of July 31, 1995

School	Inventory of PCB Transformers			Fluid (nameplate data)		
	Number of Units	Serial Number	Manufacturer	Tradename	Volume (gallons)	Weight (pounds)
Girls HS	4	6534822	Westinghouse Electric Co.	Interteen	493	6,400
		6534823	Westinghouse Electric Co.	Interteen	493	6,400
		6367219	Westinghouse Electric Co.	Interteen	366	4,750
		6367220	Westinghouse Electric Co.	Interteen	366	4,750
Central East Middle Sch. (Olney Annex)	1	E692327	General Electric Co.	Pyranol	250	3,250
Randolph Skills Center	1	8976949	General Electric Co.	Pyranol	520	6,800
Wanamaker School	1	6537493	Westinghouse Electric Co.	Interteen	419	5,450
Hackett	1	YCR-92501	Westinghouse Electric Co.	Interteen	216	2,800
MYA Parkway	2	90758	Marcus Transformer Co.	Askarel	32	430
		90759	Marcus Transformer Co.	Askarel	32	430
George Washington	2	3338913	Allis Chalmers	Chlorextol	342	4,445
		3338914	Allis Chalmers	Chlorextol	342	4,445

Notes:

1. Only PCB transformers are listed (i.e., dielectric fluid containing >500 ppm PCBs. Transformer classification is based upon either nameplate data or sampling and analysis of dielectric fluid.
2. One of the two transformers is not on-line, but is considered as being stored for reuse.

* The mesured concentration of PCB in this device is 480 ppm, and is technically not a PCB transformer. It is listed here for inventory purposes only.

Figures

Figure 1
School District of Philadelphia
Organizational Resources of the
PCB Coordinator

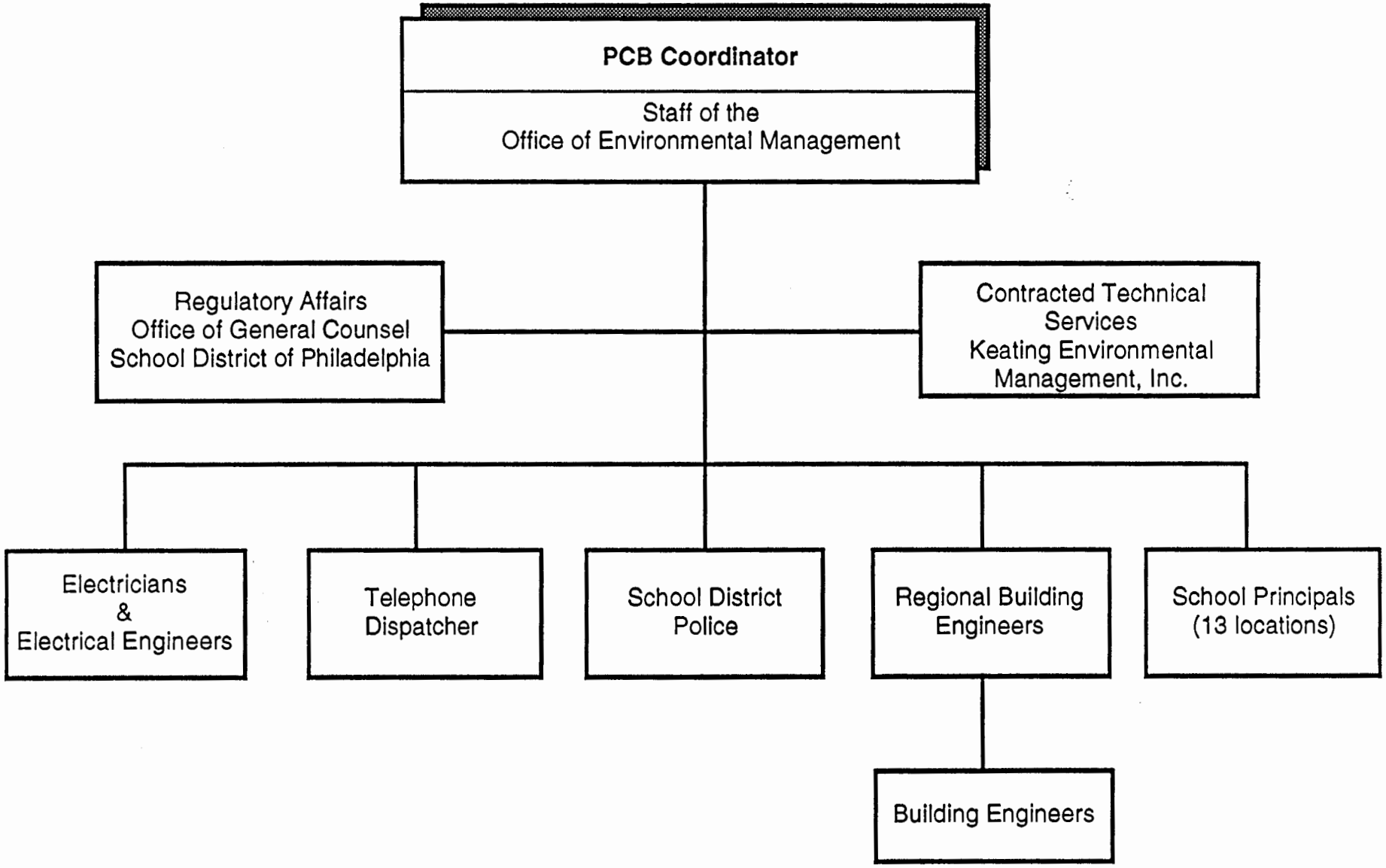

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Figure 2
School District of the City of Philadelphia
Weekly Transformer Inspection Log
for the Month of _____

School: _____
Building Engineer: _____

Transformers at this Location (list by Serial Numbers all transformers inspected:)

_____

Inspection		Doors Locked (Yes or No)	Labels in Place (Yes or No)	Any Leaks Observed (Yes or No)	Combustibles Present (Yes or No)	Inspected by
Date	Time					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
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19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Notes:

1. At the end of each month, send the completed form to:
   Marijane Hooven, PCB Coordinator
   Planning and Systems Facilities Services
   The School District of Philadelphia
   734 Schuylkill Avenue
   Philadelphia, PA 19146

2. All leaks or suspected leaks are to be reported immediately to the School District Dispatcher at 215-735-6666.

3. No combustible materials are to be stored within transformer vaults or enclosures. For transformers enclosed by metal fencing, no combustible materials are to be located within 20 feet of the transformers. Move combustible materials away from transformers immediately. Refer to Section 4.2 of the PCB Management Plan.

KEATING Environmental Management, Inc.

Figure 3
School District of the City of Philadelphia

PCB Transformer
Quarterly Visual Inspection Log

School: Roxborough **Date of Inspection:**_____

Location: Ridge & Fountain **Inspection by:**_____

Transformer Serial Number*	Manufacturer*	Dielectric Type* (Tradename)	Dielectric Weight* (pounds)	Leakage Observed		Location of Leakage and Stained Areas	Estimated Amount of Fluid Leaked
				No	Yes		
106626	Federal Pacific Elec. Co	Askarel	2,275				
106627	Federal Pacific Elec. Co	Askarel	2,275				
106628	Federal Pacific Elec. Co	Askarel	2,275				
106629	Federal Pacific Elec. Co	Askarel	2,275				

* Nameplate data previously developed.

Visual Observations Regarding Labels and Combustibles

Are Combustile materials present? YES NO

(Combustible materials include, but are not limited to, paints, solvents, plastics, paper, and sawn wood. Combustible material must not be stored within a PCB Transformer enclosure (i.e., in a transformer vault or in a partitioned area housing a transformer); within 5 meters of a transformer enclosure, or, if unenclosed (unpartitioned), within 5 meters of a PCB Transformer [761.30 (a) (1) (viii)]. Materials used on a day-to day basis, would not be considered "stored combustibles" and consequently are not required to be moved. A PCB Transformer surrounded by a chain-link fence is not considered "enclosed" for the purpose of this requirement, and therefore, combustible materials must not be stored within 5 meters of the transformer.)

If combustibles are present, describe material and location:_____

Location of PCB Labels:

Each transformer YES NO
Enclosure YES NO
Access Doors YES NO

(All PCB transformers must be individually labelled. Additionally, the vault door, machinery room door, fence (including a chain-linked fence), hallway, or other means of access (other than grates and manhole colvers) to a PCB Transformer must be marked [761.40 (j) (1)].

KEATING Environmental Management, Inc.

Figure 4

School District of the City of Philadelphia

Daily Inspection Log
for
Leaking PCB Transformers

School:_____

Date	Transformer Serial Number	Leak Contained Yes or No	Corrective/ Containment Actions	Inspected by

Figure 5
School District of the City of Philadelphia
PCB Management Plan
Preliminary Milestone Schedule, 1995

	week beginning															
	October					November				December					January	
	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14
PCB Management Plan																
· Preparation																
· Provide to USEPA (10/18)																
Labeling and Inspections																
· Label all PCB transformers and access doors																
· Complete quarterly inspections for interval 7/5/95 -10/5/95																
· Interval to perform quarterly inspections for period 10/6/95 - 12/31/95																
· Initiate, as required, daily inspections of leaking PCB transformers	→	→														
· Posting of combustible material reminders within PCB transformer enclosures																
· Weekly inspections by Building Engineers (as training provided)																→
Training																
· Identify specific School District employees to be trained																
· Provide instructions to Office of Personnel re: assignment notifications																
· Develop training materials																
· Finalize schedule for formal training to be conducted in 1996																
· Early training for School District Telephone Dispatchers																
· Formal training for selected School District personnel																→
Electrical Protection																
· Preliminary evaluation of electrical protection systems/compliance classification																
· Develop cost estimates for replacement of PCB transformers																
· Functional and calibration testing of existing primary electrical protection equipment																
· Design of upgraded electrical protection where necessary																
· Decision regarding replacement vs. upgrading at 14 locations																
· Implementation of upgrading or replacement of transformers																→

Figure 5
School District of the City of Philadelphia
PCB Management Plan
Preliminary Milestone Schedule, 1995

	week beginning															
	October					November				December					January	
	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14
Cleaning																
• 2nd round of floor and equipment cleaning at formerly leaking PCB locations																
• Receive data on target and grid wipe sampling at Roxborough High School																
• Confirm preference for remediation by cleaning followed by encapsulation																
• Additional cleaning, if required								→	→							
• Early start of surface preparation and encapsulation at Roxborough, pending EPA approval																
• Sampling, cleaning, encapsulation if required at other locations (pending confirmation and approval of method)																→
Waste Disposal																
• Initiate waste disposal activities																→
Annual Documentation																
• Begin development of Annual Document Logs and Records																→

Notes:

1. The schedule for completion of modifications required for upgrading electrical protection may be impacted by the availability of equipment and the operational needs of the School.
2. The option of encapsulation remains under evaluation by the School District. Its use is dependent upon approval by USEPA.